

Work Order ID 143973

Monday, March 28, 2016 3:13:37 PM

For w/o 143972

Ship. April 07

143973

Page 1

Item ID: 646.9703

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cutter Sub Assembly

Start Date: 3/28/2016 Start Qty: 1.00

1

Cust Item ID:

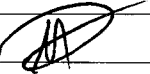
Required Date: 4/6/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: 

Date: 16-3-28

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	------------	------------	------------------	----------------

Draw Nbr

Revision Nbr

646.9700

REV D

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

DAS
6
9-89

APR 04 2016

120

0.00

120

Small Fab

Memo

0.01

Small Fab

Assemble as per dwg and apply loctite 598 on all faying surfaces per note.

A/R RTV LOCTITE 598: ~~142250~~
exp. date: 17/07

134260

1X

16/04/05

DAS
36
9-89

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

①

DAS
38
9-89

APR 05 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____ _____ _____			
Misidentified ☐	☐	Past Due ☐	☐				

Work Order ID 143973

143973

Page 2

Monday, March 28, 2016 3:13:37 PM

Item ID: 646.9703 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Cutter Sub Assembly
 Start Date: 3/28/2016 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 4/6/2016 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Identify as per dwg & Stock Location: <u>6A</u>	0.00				<u>IX</u>			<u>16/04/05</u>
140									
Packaging	Memo <u>u/o 143972</u>	0.00							
Packaging	***IDENTIFY AS PER IAW MPP-120***								
150	QC21- Final Inspection - Work Order Release	0.00							
150									
QC	Memo	0.00							
Quality Control									

MCJ APR 05 2016
SLA
 20160405

DAS
36
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

Monday, March 28, 2016 3:13:44 PM

Page 1

Work Order ID: 143973

143973

Parent Item: 646.9703

646 9703

Parent Item Name: Cutter Sub Assembly

Start Date: 3/28/2016

Required Date: 4/6/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A NEW ISSUE 16-03-07 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
646.9713 *646 9713* Body		Manufactured	No	CCK013			Each	0.0000	**	1	142551		DAS 6 9-89
646.9711 *646 9711* Blade		Manufactured	No				Each	26.0000	**	2			DAS 6 9-89
Location Loc Qty Loc Code													
CCK108A 26													
136098 20													
138180 6													
MS27039-08-19 *MS27039-08-19* Screw		Purchased	No				Each	868.0000	**	24 6			DAS 6 9-89
Location Loc Qty Loc Code													
CCK06 200													
m134142 200													
GA 505													
m132930 84													
m133077 22													
m134063 399													
over006 100													
m134294 100													
ST277 63													
m133769 63													
601.2764 *601 2764* WASHER(NAS1149FN832P)	NAS1149FN832 P	Purchased	No				Each	0.0000	**	12	133709		DAS 6 9-89

APR 1 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Picklist Print

Monday, March 28, 2016 3:13:44 PM

Page 2

Work Order ID: 143973

143973

Parent Item: 646.9703

646 9703

Parent Item Name: Cutter Sub Assembly

Start Date: 3/28/2016

Required Date: 4/6/2016

Start Qty: 1.00

Required Qty: 1.00

601.1541 MS21042L08 Purchased No

Each 0.0000

6

601 1541

133922

DAS

Locknut(MS21042L08) (8-32 Thd) (Cad Plated) (100 Q

6

3-89

APR 04 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05345

SHEET 1 OF 1

DWG NO. 646.9700

REV: D

PREPARED
BY

J. GARDINER

DATE: 03/15/16

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY:

ENGR.

MFG

QC

EFF.

CURRENT ORDER

TRANSACTION CODES (TC):

A-ADD
R-REVISE

C-CREATE
D-DELETE

REASON: REVISED NOTES

ECR:

N/A

ACTION ITEM:

1.

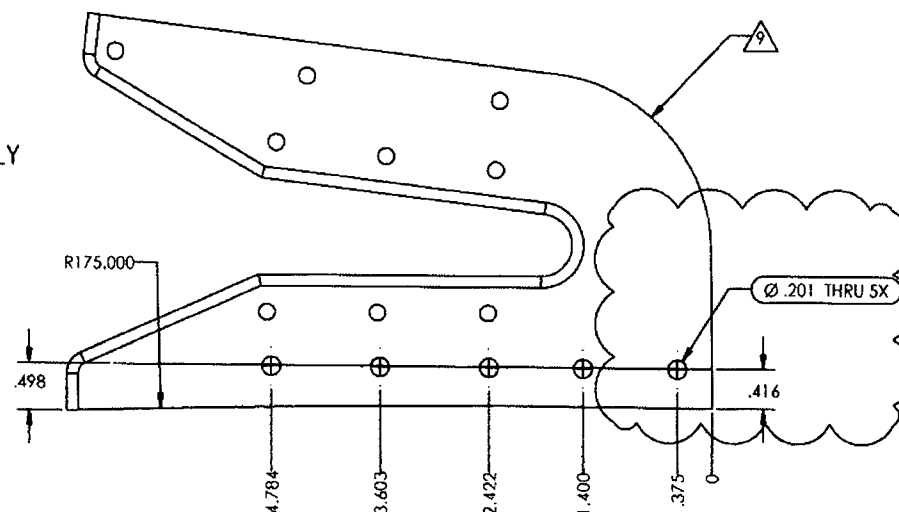
SHEET 1, ZONE A6 IS:

NOTES:

IS

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH IAW MPP-172 SECTION 2.1, 3.3 & 4.3.
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MPP-172 SECTION 3.3; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
- 7 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.

SHEET 7, ZONE C5 IS:



DOCUMENTS EFFECTED:

☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

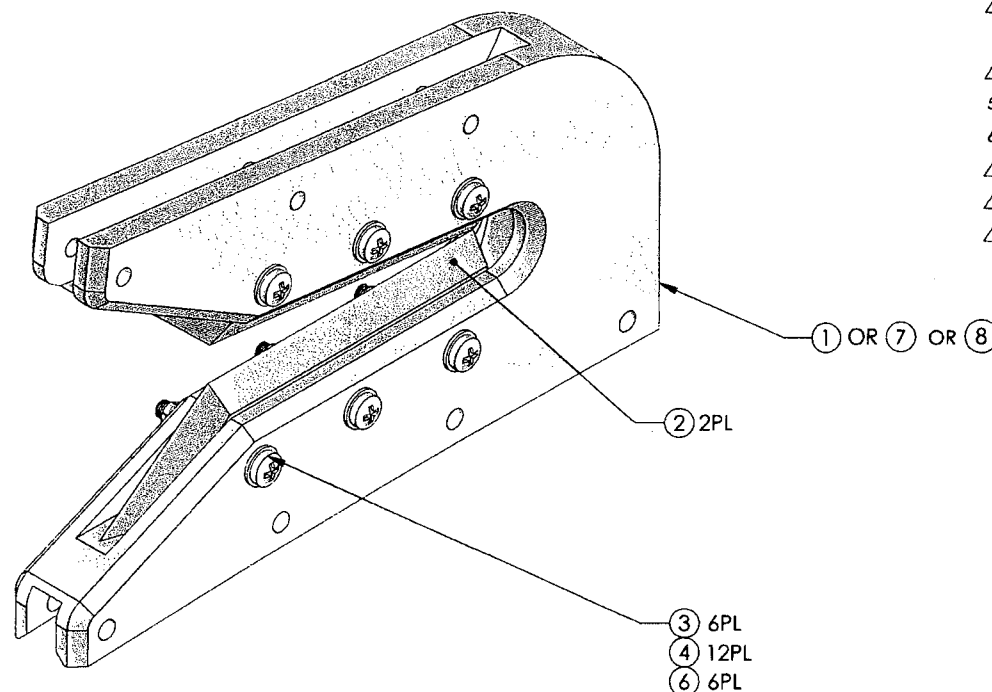
☐ YES ☒ NO

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION: P02		N/C
2	INITIAL RELEASE	03/25/09	P. BRAVO
3	INCORPORATED ECH 02744 6303A 0312	04/04/13	P. BRAVO
4	INCORPORATED ECH 03042	07/03/13	P. BRAVO
5	INCORPORATED ECH 04037	08/09/13	P. BRAVO
6	INCORPORATED ECH 05329	01/24/14	P. BRAVO

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH IAW MPP-172 SECTION 3.3 & 4.3.
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MPP-172 SECTION 3.3; 1-2 MIL MAX
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
- 7 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.



646.9701 SHOWN
646.9702 & 646.9703 TYP

UNINCORPORATED ECN(s)

05345

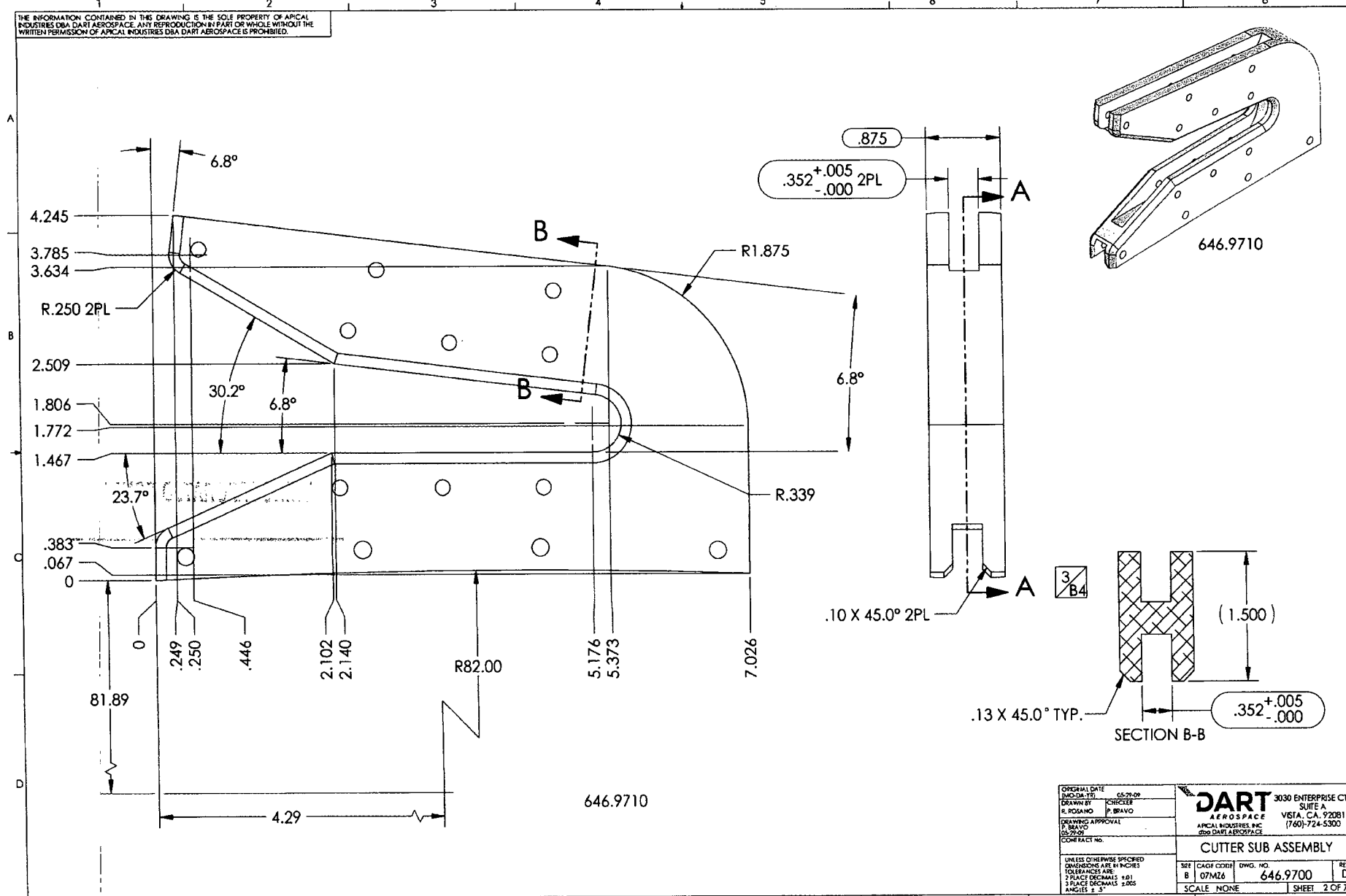
1		8	646.9713	BODY			
6	6	6	646.9712	BODY			
6	6	6	601.1541	LOCKNUT	MS21042L08		
A/R	A/R	A/R	5	601.2045	RTV, LOCTITE 598		
12	12	12	4	601.2764	WASHER	HAS1140F18032P	
6	6	6	3	601.2765	SCREW	MS27039-0819	
2	2	2	2	646.9711	BLADE		
		1	1	646.9710	BODY		
X				646.9703	CUTTER SUB ASSY		
X				646.9702	CUTTER SUB ASSY		
	X			646.9701	CUTTER SUB ASSY		
9703	9702	9701	FIND #	DESCRIPTION	MAT'L	SPEC.	
QTY				PARTS LIST			
NEXT ASSY (S)				ORIGINAL DATE			
646.9600				05-29-09			
				DRAWN BY			
				E. ROSARIO			
				CHECKER			
				P. BRAVO			
				DRAWING APPROVAL			
				P. BRAVO			
				CONTRACT NO.			
				UNLESS OTHERWISE SPECIFIED			
				DIMENSIONS ARE IN INCHES			
				TOLERANCES ARE:			
				2 PLACE DECIMALS ±.01			
				3 PLACE DECIMALS ±.005			
				ANGLES ±.5°			
				SCALE NONE			
				SHEET 1 OF 7			

DART 3030 ENTERPRISE CT., SUITE A
VISTA, CA 92081
(760)-724-5300
APICAL INDUSTRIES, INC.
DBA DART AEROSPACE

CUTTER SUB ASSEMBLY

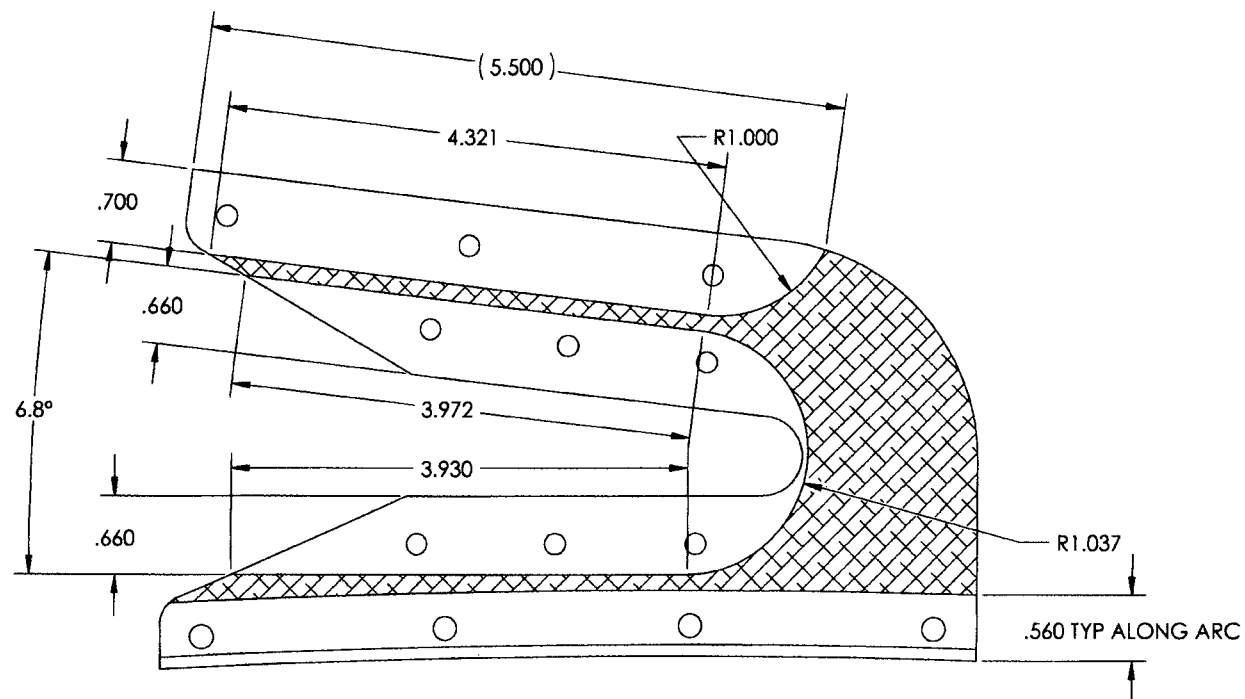
REV. D
DATE 07/12/16
DWG. NO. 646.9700

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE 05-29-09		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY H. ROSANO	CHECKED BY P. BRAVO	DART AEROSPACE APICAL INDUSTRIES INC DBA DART AEROSPACE	
DRAWING APPROVAL P. BRAVO 05-29-09	CONTRACT NO.	CUTTER SUB ASSEMBLY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV. D
CAGE CODE 07M26		DWG. NO. 646.9700	SHEET 2 OF 7
SCALE NONE			

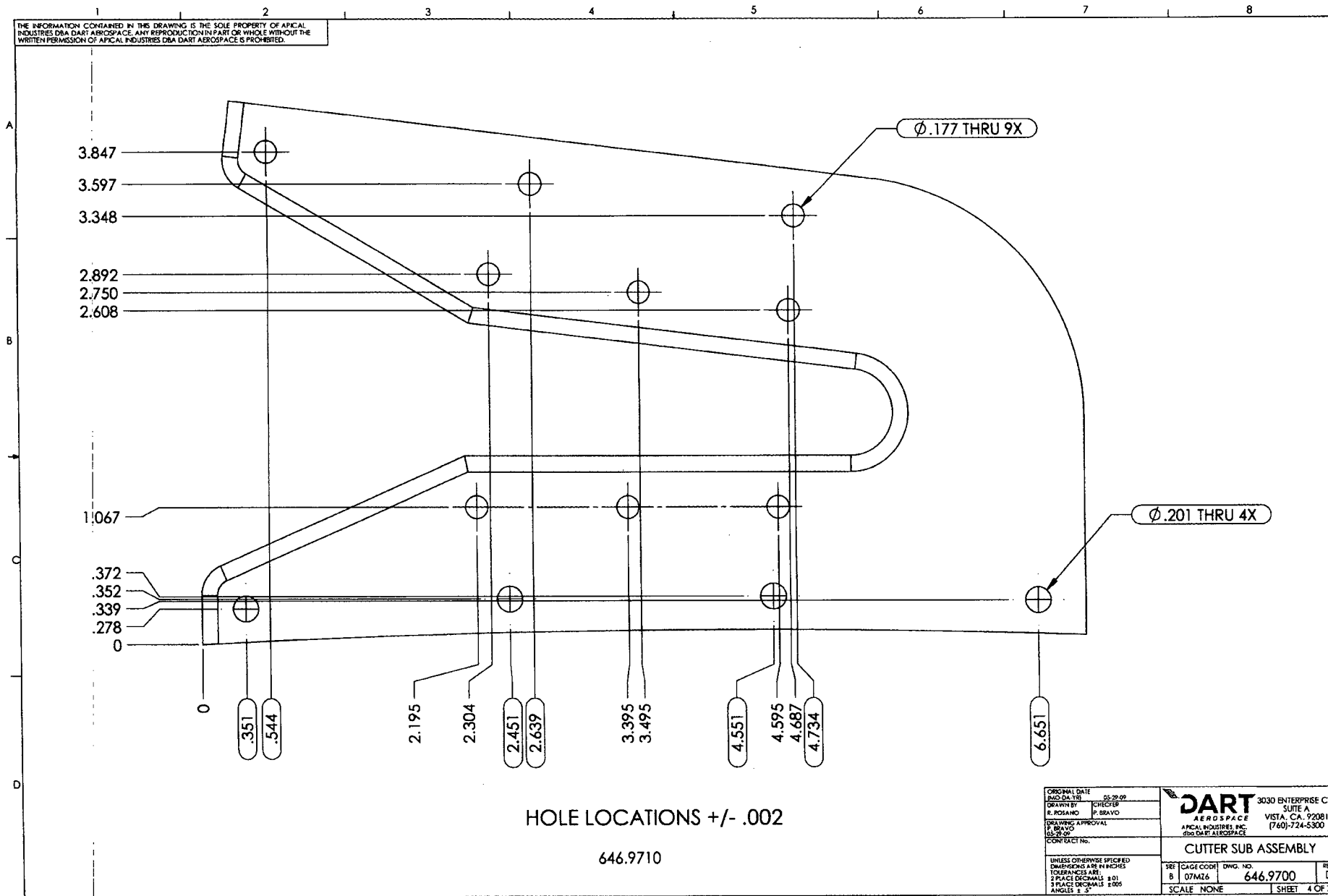
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

SECTION A-A 

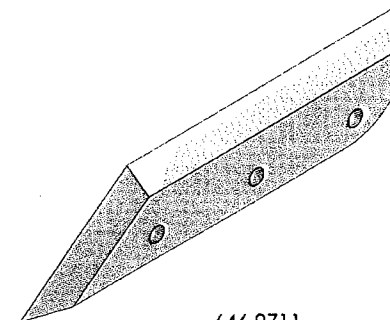
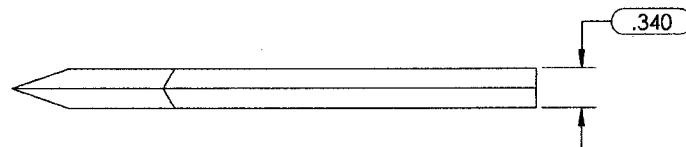
646.9710

ORIGINAL DATE (MM-DD-YY)	05-29-09	 DART AEROSPACE	3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY	C. CREAGER			
P. ROMANO	P. ROMANO			
DRAWING APPROVAL P. ROMANO	P. ROMANO			
CONTRACT NO.		CUTTER SUB ASSEMBLY		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				
TOLERANCES ARE:				
1. PLACES DIMENSIONS 1.000				
2. PLACES DIMENSIONS 1.500				
3. PLACES DIMENSIONS 1.000				
4. PLACES DIMENSIONS 1.000				
5. PLACES DIMENSIONS 1.000				
6. PLACES DIMENSIONS 1.000				
7. PLACES DIMENSIONS 1.000				
8. PLACES DIMENSIONS 1.000				
9. PLACES DIMENSIONS 1.000				
10. PLACES DIMENSIONS 1.000				
11. PLACES DIMENSIONS 1.000				
12. PLACES DIMENSIONS 1.000				
13. PLACES DIMENSIONS 1.000				
14. PLACES DIMENSIONS 1.000				
15. PLACES DIMENSIONS 1.000				
16. PLACES DIMENSIONS 1.000				
17. PLACES DIMENSIONS 1.000				
18. PLACES DIMENSIONS 1.000				
19. PLACES DIMENSIONS 1.000				
20. PLACES DIMENSIONS 1.000				
21. PLACES DIMENSIONS 1.000				
22. PLACES DIMENSIONS 1.000				
23. PLACES DIMENSIONS 1.000				
24. PLACES DIMENSIONS 1.000				
25. PLACES DIMENSIONS 1.000				
26. PLACES DIMENSIONS 1.000				
27. PLACES DIMENSIONS 1.000				
28. PLACES DIMENSIONS 1.000				
29. PLACES DIMENSIONS 1.000				
30. PLACES DIMENSIONS 1.000				
31. PLACES DIMENSIONS 1.000				
32. PLACES DIMENSIONS 1.000				
33. PLACES DIMENSIONS 1.000				
34. PLACES DIMENSIONS 1.000				
35. PLACES DIMENSIONS 1.000				
36. PLACES DIMENSIONS 1.000				
37. PLACES DIMENSIONS 1.000				
38. PLACES DIMENSIONS 1.000				
39. PLACES DIMENSIONS 1.000				
40. PLACES DIMENSIONS 1.000				
41. PLACES DIMENSIONS 1.000				
42. PLACES DIMENSIONS 1.000				
43. PLACES DIMENSIONS 1.000				
44. PLACES DIMENSIONS 1.000				
45. PLACES DIMENSIONS 1.000				
46. PLACES DIMENSIONS 1.000				
47. PLACES DIMENSIONS 1.000				
48. PLACES DIMENSIONS 1.000				
49. PLACES DIMENSIONS 1.000				
50. PLACES DIMENSIONS 1.000				
51. PLACES DIMENSIONS 1.000				
52. PLACES DIMENSIONS 1.000				
53. PLACES DIMENSIONS 1.000				
54. PLACES DIMENSIONS 1.000				
55. PLACES DIMENSIONS 1.000				
56. PLACES DIMENSIONS 1.000				
57. PLACES DIMENSIONS 1.000				
58. PLACES DIMENSIONS 1.000				
59. PLACES DIMENSIONS 1.000				
60. PLACES DIMENSIONS 1.000				
61. PLACES DIMENSIONS 1.000				
62. PLACES DIMENSIONS 1.000				
63. PLACES DIMENSIONS 1.000				
64. PLACES DIMENSIONS 1.000				
65. PLACES DIMENSIONS 1.000				
66. PLACES DIMENSIONS 1.000				
67. PLACES DIMENSIONS 1.000				
68. PLACES DIMENSIONS 1.000				
69. PLACES DIMENSIONS 1.000				
70. PLACES DIMENSIONS 1.000				
71. PLACES DIMENSIONS 1.000				
72. PLACES DIMENSIONS 1.000				
73. PLACES DIMENSIONS 1.000				
74. PLACES DIMENSIONS 1.000				
75. PLACES DIMENSIONS 1.000				
76. PLACES DIMENSIONS 1.000				
77. PLACES DIMENSIONS 1.000				
78. PLACES DIMENSIONS 1.000				
79. PLACES DIMENSIONS 1.000				
80. PLACES DIMENSIONS 1.000				
81. PLACES DIMENSIONS 1.000				
82. PLACES DIMENSIONS 1.000				
83. PLACES DIMENSIONS 1.000				
84. PLACES DIMENSIONS 1.000				
85. PLACES DIMENSIONS 1.000				
86. PLACES DIMENSIONS 1.000				
87. PLACES DIMENSIONS 1.000				
88. PLACES DIMENSIONS 1.000				
89. PLACES DIMENSIONS 1.000				
90. PLACES DIMENSIONS 1.000				
91. PLACES DIMENSIONS 1.000				
92. PLACES DIMENSIONS 1.000				
93. PLACES DIMENSIONS 1.000				
94. PLACES DIMENSIONS 1.000				
95. PLACES DIMENSIONS 1.000				
96. PLACES DIMENSIONS 1.000				
97. PLACES DIMENSIONS 1.000				
98. PLACES DIMENSIONS 1.000				
99. PLACES DIMENSIONS 1.000				
100. PLACES DIMENSIONS 1.000				
101. PLACES DIMENSIONS 1.000				

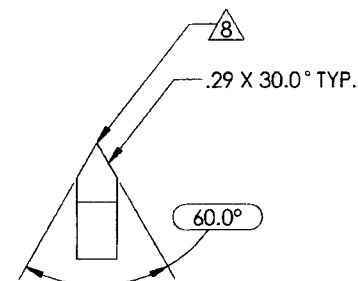
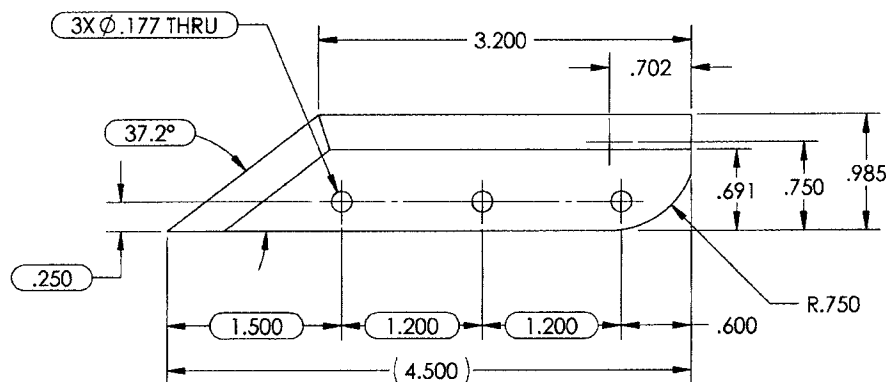
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



646.9711



646.9711

ORIGINAL DATE 05-26-00		3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY R. ROSANO P. BRAVO		DART AEROSPACE	
DRAWING APPROVAL P. BRAVO 05-29-00		APICAL INDUSTRIES INC. DBA DART AEROSPACE	
CONTRACT NO.		CUTTER SUB ASSEMBLY	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.02 3 PLACE DECIMALS ±.005 ANGLES ± .5°		REV. D	REV. D
8	CAGE CODE 07M26	DWG. NO. 646.9700	SCALE NONE
SHEET 5 OF 7			

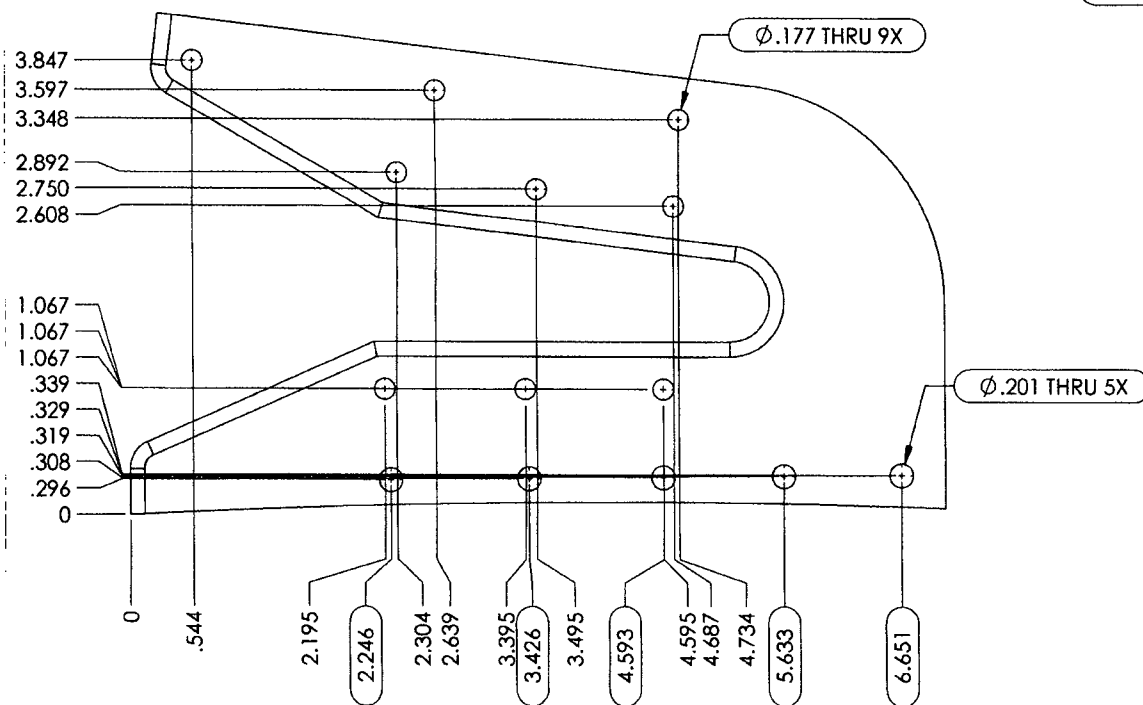
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

A

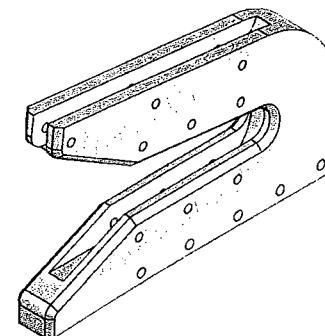
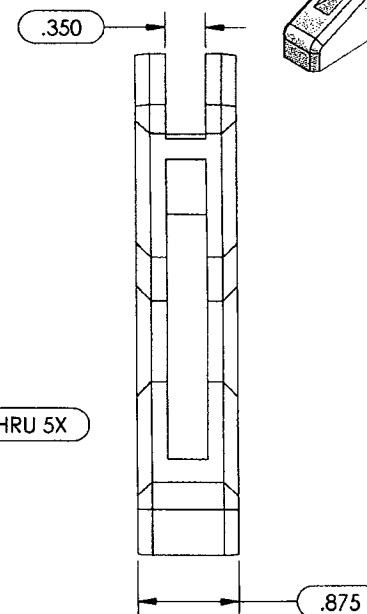
B

C

D



646.9712



646.9712 $\triangle 9$

ORIGINAL DATE 10/05/01		05-29-01	
DRAWN BY R. ROSANO		CHECKED P. BRAVO	
DRAWING APPROVAL P. BRAVO		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$			
CAGE CODE B 07ME6		DWG. NO. 646.9700	
SCALE NONE		REV. D	
SHEET 6 OF 7		SHEET 6 OF 7	

DART 3030 ENTERPRISE CT., SUITE A
AEROSPACE VISTA, CA. 92081
APICAL INDUSTRIES, INC. (760)-724-5300
DBA DART AEROSPACE

CUTTER SUB ASSEMBLY

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DSA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DSA DART AEROSPACE IS PROHIBITED.

